

REMARKS

Claims 1-8 were examined in the Office Action mailed March 30, 2005.

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,108,190 to Nagasaki ("Nagasaki"), in view of European Patent Publication No. 1 052 309 A2 to Bondestam, *et al.* ("Bondestam").

The Applicants have carefully considered the pending rejections, and respectfully submit the foregoing amendments and following remarks.

In the foregoing amendments, claim 1 has been amended to incorporate the limitation of its dependent claim 4, wherein the support member is formed as a part of a process chamber wall. Claim 4 has been canceled accordingly, without prejudice to the subject matter therein.

In addition, new claim 9 depending from claim 1 has been added to separately recite claim 1's cooling mechanism location. Conforming amendments to change the dependency of claims 6-7 to claim 9 have also been made.

The Claims Are Patentable Over Nagasaki and Bondestam: The Applicants respectfully traverse the pending § 103(a) rejection of amended claim 1 and its dependent claims.

As amended, claim 1 recites that the support member is a part of the wall of the process chamber and is made of a metal matrix composite. This unique combination of support member arrangements and materials advance the state of the art by having the support member (*e.g.*, Fig. 1, element 6) simultaneously supporting a heated placement stage (*e.g.*, Fig. 1, susceptor element 4), while solving susceptor cracking problems due to thermal stresses during blazing by

use of a metal matrix composite, and minimizing chamber volume by forming the support member as a metal matrix part of the chamber wall. *See, e.g.*, Specification at 7:16-21 (integrated formation to minimize chamber volume); 9:26-10:5 (metal matrix composite capable of being blazed while still having a low thermal expansion coefficient, close to ceramics, precluding development of high thermal stresses in susceptor 4).

The Applicants respectfully note that there is no teaching or suggestion in either Nagasaki or Bondestam to integrate a metal matrix composite support member as part of a process chamber wall, as recited in amended claim 1. Specifically, Nagasaki teaches only an approach to forming a wafer holding block, comprising a wafer-supporting surface 4 on top of a base block 11; there is no suggestion in this reference to form the wafer supporting a part of a process chamber wall, or to use a metal matrix composite as a part of the chamber wall for any reason. Nagasaki Figs. 1A, 1B; 2:55-60.

For its part, the Bondestam reference teaches nothing more than a “movable base plate 18 with its integral heating plate 19”; there is no teaching or suggestion of forming the base plate of a metal matrix composite, or to form a supporting surface as a part of the chamber wall. Bondestam Fig. 3; ¶ [0059]. Bondestam thus fails to provide the teaching or suggestion lacking in Nagasaki for the combination of these references to solve the problems addressed by the present invention. The mere fact that the references *might* be combinable (a position the Applicants would strongly traverse, given the apparent physical incompatibility of Nagasaki’s block construction with Bondestam’s chamber

arrangements), is, of course, insufficient grounds "to render the resultant combination obvious unless the prior art also suggests the desirability of the combination" (which is not the case with the Nagasaki or Bondestam references). MPEP § 2143.01 (citing *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); *accord Id.* (mere fact that references teach all the elements not sufficient to establish a *prima facie* case of obviousness "without some reason to combine the teachings of the references" (citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993))). Indeed, in the absence of any teaching or suggestion in either reference for their combination, the only remaining source of such a suggestion here would be an impermissible reconstruction of the present invention based on "knowledge gleaned only from the applicant's disclosure." MPEP§ 2145.X.A (citing *In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971)).

Because there is no teaching or suggestion in the prior art for the combination of the Nagasaki and Bondestam references to obtain the invention recited in amended claim 1, this claim and is dependent claims 2-3 and 5-9 are patentable over these references under § 103(a). Reconsideration and withdrawal of the pending § 103(a) rejection is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, the Applicant respectfully submits that claims 1-3 and 5-9 are in condition for allowance. Early and favorable consideration, and issuance of a Notice of Allowance for these claims is respectfully requested.

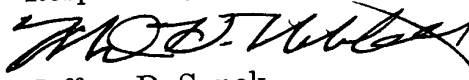
If there are any questions regarding this amendment or the application in

general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #010986.52734US).

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